

SEX-LIMITED POLYCHROMATISM IN  
*LASIOPHTICUS PYRASTRI* (LINN.)

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Early last June I collected a large population of the common syrphid fly *Lasiophticus pyrastris* (Linn.) on the University Farm at Davis, California. This series, which was taken by sweeping so as to be representative of the fauna, numbered 277 individuals. When a classification was made, there were found to be 235 specimens of the normal bicolored phase, of which number 98 were females and 137 were males. This is a decidedly unbalanced sex ratio. The remaining 42 members of the population were of the melanic variety, described by Curtis as *unicolor*. It was observed that all of these melanic flies were females, and it is interesting to note that when their number is added to the 98 females of the bicolored type there appears the well-balanced sex ratio for the whole population of 140 females and 137 males.

The above data lead to the conclusion that the melanic form *unicolor* appears only in the female sex. Moreover, Curtis, in his description of this variety, gives the impression that he had but one specimen, and his colored illustration is definitely that of a female. Still more evidence was obtained from an examination of the material in the collection of the California Academy of Sciences. This series contains thirteen specimens of *unicolor* collected in various parts of California, and all of these are females. The evidence, therefore, appears to be conclusive.

An intermediate form, although comparatively rare, also occurs. I took three specimens of this variety in Davis last June, but these were obtained by selective collecting. They are characterized by having the yellow markings persisting on the second abdominal segment, although they are much reduced in size. The California Academy of Sciences has one such individual collected by Dr. E. C. Van Dyke on Mount Ranier, Washington, in 1920. Two other specimens are cited by Cole and Lovett in their "Diptera of Oregon." All six of these intermediates are also females. We may, therefore, assume that this variety, as well as the completely melanic one, is sex-limited to the female. The species, therefore, appears to be an example of sex-limited polychromatism, in which there is only one type of male but three types of females.